IIPP Program Procedures 11.0 Occupational Ergonomics

PREVENTION OF REPETITIVE MOTION INJURIES (RMIs)

1.0 POLICY

The purpose of the County of Monterey’s Ergonomics Process is to prevent and effectively manage work related musculoskeletal disorders (WMSDs) such as Repetitive Motion Injuries or Cumulative Trauma Disorders (CTDs) and minimize the associated costs and lost productivity. The Ergonomics process is a lean, pro-active, participative approach driven by employee and management participation. The process is based on employee participation to prompt a response to address concerns in a positive and preventive manner whenever possible. The County’s Ergonomics Process is intended to achieve the following goals:

1. Reduce the pain and discomfort that many employees experience at work by evaluating worksites and work practices that may lead to the development of WMSDs.
2. Implement hazard prevention and control measures that will effectively minimize or abate entirely the risk factors revealed through worksite analysis.
3. Reduce the financial toll on the County of Monterey for direct and indirect medical, administrative and workers’ compensation costs experienced related to RMIs and CTDs by offering ergonomic services for improved medical-disability management.
4. Provide education and training to employees who are at risk for developing CTDs and RMIs so that they can actively participate in the prevention of these injuries and illnesses in the workplace.

Whereas:

Section 5110, California Code of Regulations, Title 8 sets forth requirements for employers to implement a program to prevent Repetitive Motion Injuries (RMIs). The regulation applies to worksites where an injury has occurred to more than one employee and meets the scope and application noted below.

(a) Scope and application. This section shall apply to a job, process, operation where a repetitive motion injury (RMI) has occurred to more than one employee under the following conditions:
   (1) Work related causation. The repetitive motion injuries (RMIs) were predominantly caused (i.e. 50% or more) by a repetitive job, process, or operation;
   (2) Relationship between RMIs at the workplace. The employees incurring the RMIs were performing a job process, or operation of identical work activity. Identical work activity means that the employees were performing the same repetitive motion task, such as but not limited to word processing, assembly or, loading;
(3) Medical requirements. The RMIs were musculoskeletal injuries that a licensed physician objectively identified and diagnosed; and
(4) Time requirements. The RMIs were reported by the employees to the employer in the last 12 months but not before July 3, 1997.

(b) Program designed to minimize RMIs. Every employer subject to this section shall establish and implement a program designed to minimize RMIs. The program shall include a worksite evaluation, control of exposures which have caused RMIs and training of employees.

(1) Worksite evaluation. Each job, process, or operation of identical work activity covered by this section or a representative number of such jobs, processes, or operations of identical work activities shall be evaluated for exposures which have caused RMIs.

(2) Control of exposures which have caused RMIs. Any exposures that have caused RMIs shall, in a timely manner, be corrected or if not capable of being corrected have the exposures minimized to the extent feasible. The employer shall consider engineering controls, such as work station redesign, adjustable fixtures or tool redesign, and administrative controls, such as job rotation, work pacing or work breaks.

(3) Training. Employees shall be provided training that includes an explanation of:
   (A) The employer's program;
   (B) The exposures which have been associated with RMIs;
   (C) The symptoms and consequences of injuries caused by repetitive motion;
   (D) The importance of reporting symptoms and injuries to the employer; and
   (E) Methods used by the employer to minimize RMIs.

(c) Satisfaction of an employer's obligation. Measures implemented by an employer under subsection (b)(1), (b)(2), or (b)(3) shall satisfy the employer's obligations under that respective subsection, unless it is shown that a measure known to but not taken by the employer is substantially certain to cause a greater reduction in such injuries and that this alternative measure would not impose additional unreasonable costs.

Ergonomics Policy and Primary Process Components:
2.0 Management Commitment and Employee Participation Policy
3.0 Ergonomic Worksite Analysis Policy
4.0 Hazard Prevention and Control Measures Policy
5.0 Medical-Disability Management Policy
6.0 Training and Education Policy
7.0 Compliance Audits and Investigations Policy

2.0 Management Commitment and Employee Participation Policy

County administrators and department managers demonstrate a commitment by supporting an effective injury prevention and management program by providing the organizational resources, fiscal backing, leadership and personnel necessary to deal effectively with the identified ergonomic risks. Cooperation and communication is required from all segments of the County organization to develop and maintain a safe work environment for employees.

2.1 Department Management: It is the responsibility of managers and supervisors to provide a safe work environment. Supervisors and managers must be prepared to coordinate and communicate with employees on work practices and ergonomic evaluation procedures in order to maximize opportunities to prevent RMI injury by early intervention. Managers and supervisors are expected to support and promote the purpose of the ergonomics process set forth by the Board of Supervisors, Administrators and Executive Management. Such support and emphasis should be viewed as a business practice that is equal to any other management objective or department goal.

Whenever possible, RMI prevention techniques should be integrated into the routine practices and procedures of the work unit. As with other health and safety issues, documentation of RMI prevention efforts establishes a historical record and, in some instances, may demonstrate compliance with regulatory requirements. The annual departmental budget planning process should give consideration to ergonomic expenditures and include those costs within the appropriate line items in anticipation of implementing hazard prevention and control measures. Any ergonomic recommendations made that are financially and technically feasible shall be implemented in a timely manner of 30 days or less whenever possible. It is the responsibility of each department to pay for the changes recommended or to discuss other options with Risk Management to assure timely implementation for the prevention and management of WMSDs.

2.2 Risk Management: The County Ergonomics Manager will assist departments in developing specific policies, procedures, training, workstation evaluations or other resources to help work units prevent and manage RMI/CTD incidents. Workers’ compensation claims will be reviewed and ergonomic worksite analysis will be performed as appropriate to injury type to prevent re-injury or aggravation to employees; such evaluations may be done by a designated department Level I evaluator (for non-symptomatic employees only), the County Ergonomics Manager or qualified contract consultants (Board Certified Ergonomist with Health Care degree PT, OT or RN degree or human factors/ergonomics degree) depending on the particular circumstances.
2.3 Purchasing: Purchasing management in concert with the Ergonomics Manager has implemented procedures to review the acquisition of new office furniture or equipment. Such procedures consider the adjustability, durability, “greenness” and compliance with regulatory requirements, ANSI 100 standards, cost and the expected future use of the equipment. Departments intending to replace old furniture; relocate or renovate existing work areas shall contact the Ergonomics Manager to develop a facility plan with ergonomics in mind to be considered in the planning and purchase process.

2.31 The purchasing of ergonomic accessories will be selected from a list of preferred products and vendors known to minimize employee symptoms and have been previously approved by the Ergonomics Manager for quality, comfort, pricing and other qualifiers.

2.32 The purchase of products or tools recommended reducing ergonomic risk factors associated with pain; discomfort or a known injury for an individual shall be purchased by the department or deferred to Risk Management to pay as a claim avoidance or loss control expense. Departments must purchase these products promptly through this process, especially if a physician has approved the recommendations identified in the Ergonomic Analysis. Otherwise, Risk Management will have no choice except to make the purchase directly. These Costs will be tracked and charged back to departments through the workers’ compensation budgets at the appropriate time.

2.33 Office supplies associated with improved task performance of essential functions that help to reduce force, repetition and awkward postures shall be provided in a timely manner upon recommendation without the need of an ergonomic analysis. This may include but is not limited to the use of telephone headsets (corded or cordless), document holders, electric staplers, electric hole puncher and ergonomic pens.

2.4 Information Technology: The Information Technology Department (and Telecom) is the technical resource on hardware and software applications. Some of these applications may be related to engineering controls to prevent RMI exposures. Alternative keyboards, pointing devices or the use of behavior based software (i.e. interruption software; keystroke management) will be approved in advance by the IT department and assist with installation for employees with specific needs of these products as requested. The Ergonomics Manager shall work in conjunction with the IT department on such matters.

2.5 Employees: Employee participation and feedback through clearly established procedures, such as completing a self-assessment or other work survey (online or other methods), is essential in identifying existing and potential risks (perceived or known) as well as assure accountability regarding the employee’s responsibility in the ergonomics process. Employees shall be encouraged to report any RMI symptoms suspected to be work related as early as possible. Other reasons to request assistance include concerns with workstation set up and equipment use, new hire, new procedure or task, recent relocation or a safety concern. Management may request an ergonomic worksite analysis (EWA) for the employee but both needs to sign for the request. Such reporting shall require submission of a request for an evaluation by the employee and/or supervisor regardless of whether a workers’ compensation claim is filed or if medical treatment is provided (i.e. Request an Ergonomic Evaluation). A physician may also prescribe an evaluation for an employee. A good faith effort to minimize and/or eliminate the ergonomic exposures to the extent feasible through hazard prevention and control measures (Section 4.0) must be taken in a timely manner.
3.0 **Ergonomic Worksite Analysis (EWA) Policy**

Ergonomic Worksite Analysis is performed upon request by an employee, supervisor, insurance request or physician in conjunction with the criteria established in Section 5110 regarding job, process, or operation of an identical work activity that may have caused exposures to an RMI. Ergonomic Worksite Analysis is performed by qualified providers based on the type of evaluation and the situation presented. All ergonomic evaluations shall be coordinated and schedule by or through the County Ergonomics Manager. Reasons for an Ergonomic Worksite Analysis include but are not limited to the following:

- Employee concern about workstation set up
- Employee concern with physical discomfort (early symptoms)
- New or revised process, procedure or task
- New hire employee or new workstation
- Safety concern
- Workers’ compensation claim
- Non-occupational injury, illness or disability
- As part of the interactive process (ADA)
- As part of a facility renovation and planning process

3.1 **Provision of Ergonomic Worksite Analysis:** EWA is necessary to identify and document ergonomic risk factors (primary and secondary) through observation and measuring the relationship of the worker to his/her work station, tasks, tools and environment. The use of photography or video to document the work environment, work practices and techniques and for further study is utilized routinely. Employees are strongly encouraged to participate for the purpose of documenting the work practices effectively for without them the relationship of the worker and work can not be determined. Performing a EWA may include the following but is not limited to:

a. Reviewing medical, safety and insurance records
b. Identifying trends and patterns related to departments or job classes through survey, interview and discussion with employees and supervisors.
c. Evaluating workstations for ergonomic risks and hazards that may include the presence of or exposure to awkward and/or static work postures, forces, repetition, vibration, cold exposure, contact stress and other personal factors.
d. Documenting identified risks and summarizes findings.
e. Developing and documenting hazard prevention and control measures for implementation in a timely manner (30-90 days or less).
3.2 Levels of Ergonomic Worksite Analysis:
Three levels of EWA intervention are offered:

- Level I – In-house evaluation by a trained ergonomic evaluator (county employee or Ergo Manager) to provide employee instruction on safe work practices and how to set up and use existing equipment effectively.
- Level II- Evaluation provided by the Ergonomics Manager or a 3rd party contracted evaluator (Board Certified Ergonomist with appropriate healthcare degree or human factors/ergonomics degree) in response to expressed reporting of early symptoms or the filling of a medical only claim.
- Level III- Evaluation provided by the Ergonomics Manager or a 3rd party contracted evaluator (Board Certified Ergonomist with appropriate healthcare degree or human factors/ergonomics degree) in response to expressed reporting of a complex workers’ comp claim that has resulted in lost time, a known disability (occupational or non-occupational) or as part of the interactive process.

3.3 Review of Ergonomic Worksite Analysis Reports: Ergonomic analysis reports should be considered as privileged information, protected under HIPAA and other privacy laws, to be distributed on a limited basis to only those that need to know. Reports provided to management following an ergonomic evaluation must arrange to meet with the employee to review the findings, confirm the recommendations as appropriate and necessary for the employee and reinforce changes made as well as review safe work practices.

*Management and employee must sign the report within 5 business days and return to the Ergonomics Manager.* Management decides in a timely manner (e.g. within 10 days), how any recommended purchases will be paid by selecting the appropriate response in the report i.e. through their department or deferred to Risk Management (to be charged back in future workers’ compensation budget). Signed reports (copy or original) should be sent by fax, scan/email or interoffice mail to the Ergonomics Manager.

4.0 Hazard Prevention and Control Measures Policy
Identify and implement measures to prevent or control the hazards and risks identified in the ergonomic worksite analysis to the extent feasible. Implementation should take the minimal time necessary to minimize or eliminate the risk and is expected to be completed within a 30-90 day period or less with some exceptions. Ensure a system to track the implementation and success of controls implemented.

4.1 Engineering Controls: Appropriate measures to reduce RMI incidents include but are not limited to work station redesign, adjustable fixtures or tool redesign. This includes the purchase of ergonomic accessories and tools such as but not limited to: adjustable ergonomic chairs, adjustable tables/work surfaces; footrests, document holders, task lighting; glare screens; use of material handling devices; adaptive equipment or tools or other specialized equipment. Any modification to the work environment to reduce
RMI exposures may be considered engineering controls. Specialized technical expertise may be required in some situations.

4.2 Administrative Controls: Appropriate measures to reduce RMI exposures include task or job rotation, work pacing, work flow modifications or work breaks i.e. mini breaks. These controls are intended to reduce the duration, frequency, intensity and severity of the exposure to ergonomic stressors. Controls such as the use of interruption software (ex. StretchBreak or RSI Guard) to prompt task interruption or other behavioral changes is appropriate.

4.3 Work Practice Controls: Work practice controls include education and training on safe and unsafe work practices intended to provide the appropriate methods and habits to prevent the onset of an RMI or CTD. These include proper work habits and techniques, employee conditioning and stretching, preferred equipment use and other controls as it applies to the office or other work settings.

4.4 Personal Protective Equipment (PPE): This includes special clothing provided by the employer such as padding, gloves or other devices worn or attached to the body of the employee. Use of PPE requires specific training and documented procedures. PPE shall not be considered a substitute for feasible engineering or administrative controls. Wrist splints and/or compression wraps, back braces or similar devices that immobilize a body part are not considered PPE. These devices are to be provided and used under medical supervision only. The distribution of PPE is provided as needed following the completion of a EWA or safety audit that indicates the need for these devices.

4.5 Vision Care Program: Existing resources that support the goals of RMI prevention include the County’s vision plan. This plan offers prescription computer glasses for designated employees and may be appropriate as a control measure in certain instances regarding vision and monitor viewing.

4.6 Maintenance and Facility Actions: It is often necessary for maintenance or facilities to assist with the installation, repair or relocation of furniture or equipment to improve efficiency and placement of these items. As needed, this activity may be outsourced as appropriate. Assistance from County sources aware of the ergonomics process will benefit the County overall.

5.0 Medical-Disability Management Policy
Medical-disability management is necessary to minimize and eliminate signs and symptoms associated with CTDs and RMIs. While early identification is essential to help prevent the onset of these WMSDs, early medical intervention is just as important following the reporting of a work injury. It is important that medical diagnosis and treatment be promptly provided when symptoms are presented. Many methods of treatment are available ranging from conservative therapy to surgery. It is generally agreed in the medical community that early intervention and prevention strategies can play a significant role in eliminating or minimizing the physical effects of RMI exposures. Prompt and early management of symptoms using self-care methods to manage mild musculoskeletal discomfort may help to
alleviate symptoms entirely and rapidly during the first few days of discomfort. In addition, requesting an ergonomic worksite analysis promptly is critical in making changes to the work area and work practices to minimize aggravation. Employees presenting with a physician prescription for an ergonomic analysis shall undergo one promptly. Recommendations will be implemented based on the ergonomics purchase policy (Section 2.32).

5.1 Non-Occupational Injuries, Illness and Disabilities: Regardless of whether an injury, illness or disability is work related, does not limit an employee from requesting an ergonomic analysis if they believe their situation is creating additional concerns for them at work. The Ergonomics policy applies to these areas as well with consideration to HIPAA, FEHA, and ADA legislation. The County has additional policies regarding these areas for more details.

6.0 Ergonomics Training and Education Policy
Ergonomics training and education is offered routinely to ensure that employees are sufficiently informed about the County of Monterey Ergonomics Process, ergonomic risks and hazards to which they may be exposed and thus be able to participate actively in their own protection. All levels of management and employees shall receive training, each with a slightly different emphasis. All County of Monterey employees are expected to attend some type of general ergonomics training a minimum of every two years. General ergonomics training is recommended to support up to 45 participants per class and last a minimum of one hour. All ergonomics training should be documented and retained for at least 3 years and may be subject to Cal-OSHA inspection.

6.1 Ergonomics Training Components: Training shall include an overview of the potential risk of illnesses and injuries, their causes and early symptoms/signs to be aware of, means of prevention and treatment as well as an explanation of the County’s process. This covers but is not limited to:
  (A) The employer's program;
  (B) The exposures which have been associated with RMIs;
  (C) The symptoms and consequences of injuries caused by repetitive motion;
  (D) The importance of reporting symptoms and injuries to the employer; and
  (E) Methods used by the employer to minimize RMIs.

6.2 Ergonomics Training Satisfaction: The “live” classroom training shall include a means for evaluating the effectiveness of the training and education by offering a “satisfaction survey” to employees regarding the perceived benefits of the training provided and to offer quality measures regarding the training’s success.

6.3 Other means of ergonomics training: Employees may also benefit from other types of educational tools that emphasize the criteria noted above and may include online training, video, DVD or hard copy reading materials, and one: one evaluation and training. However, none of these will be a substitute for participation in live training when required, unless otherwise approved by the Ergonomics Manager.

6.4 Custom Ergonomics Training: Both general and job specific ergonomics training is available for departments that perform tasks outside the office environment. This
includes material handling, health care ergonomics, laboratory ergonomics and other specialty areas. Often these trainings are developed following an ergonomic analysis of the specific work tasks and routines and encourage management and employee participation for best outcomes.

7.0 **Compliance Investigation and Audits Policy:**
Department management, supervision and employees will provide full and complete cooperation with all ergonomic worksite evaluation, audit or investigation initiated by County of Monterey management, Risk Management or Cal-OSHA that involves occupational health and safety complaints or investigation of a work related RMI injury using ergonomic analysis as appropriate.

**Glossary of Terms:**
- **Work related musculoskeletal disorders (WMSDs):** Typically include injury and illnesses such as bursitis, tendinitis, muscle strains, and nerve entrapments that often occur to the neck, back, shoulders, upper arm, forearm, wrist and hands, including the fingers. These disorders are due to repeated exposures to biomechanical stressors over an extended period of time affecting the muscles, nerves, tendons, ligaments and joints of the body.
- **Cumulative Trauma Disorder: CTD** is a general term to describe the cumulative impact of force, repetition and posture on a body part resulting in an injury to that specific area. It is typically due to exposure over time of biomechanical stressors such as force, repetition and posture.
- **Repetitive Motion Injury: RMI** is a general term to describe an injury associated with performing the same repetitive motion patterns over and over. The terms WMSD, CTD and RMI are often used interchangeably to describe the same type of injury resulting from biomechanical stressors.
- **Ergonomic Risk Factors:** Exposures to the ergonomic risk factors may result in a CTD or RMI if duration, frequency and intensity of the task exceed the user’s tolerance and include:
  - **Repetitive or sustained motion patterns** where the same tool/instrument is used over and over in the same motion pattern. I.e. repetitive keystroke or mouse clicking, manual stapling, lifting boxes.
  - **Forceful exertion:** to exert force to move an object. I.e. activating keys on a keyboard, button activation on a mouse, manual stapling or hole punch use, lifting heavy load.
  - **Awkward or sustained postures:** Working in positions outside of neutral alignment for the spine or extremities repeatedly or static, sustained postures. I.e. seated too long, prolonged standing, cradling the telephone
  - **Contact stress or pressure:** Prolonged pressure on an extremity creating internal pressure enough to substantially reduce blood flow and impact glide of tendons, ligaments or joints. I.e. leaning on a wrist rest or on a hard surface with the wrist, sitting on a hard seat with pressure to the back of the thigh, pressure to the side of the finger.
  - **Cold exposure:** typically to outdoor environments of temperatures < 40 degrees.
• **Vibration:** Hand/arm vibration contributes to reduced microcirculation and impairs nerve conductivity over time resulting in changes in sensation to the affected body part. I.e. using a vibrating tool, chainsaw, and jack hammer.

• **Secondary Risk Factors:** In addition to the ergonomic risk factors noted above, there are significant psychological and social factors such as organizational dynamics that influence experiencing a CTD or RMI. Factors such as morale, job satisfaction, disciplinary actions taken or pending, inconsistent policy and procedure applications, budget constraints, interpersonal work relationships and management styles may influence how employees present RMI symptoms.

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